

Claims

1. A tubular stairlift rail of non-circular cross-section having an internal surface and an external surface, said internal surface defining a single cavity within said rail; said external surface being free of fabricated additional members positioned to prevent rotation of a stairlift carriage about said rail.
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2. A tubular stairlift rail of substantially constant cross-section for use with a stairlift carriage, said carriage having support rollers to support said carriage for movement along said rail, said rail having a single internal cavity; roller engagement surfaces formed in the outer periphery thereof, said roller engagement surfaces being configured to, in combination with said rollers, prevent rotation of said carriage about said rail.
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3. A rail as claimed in claim 2 wherein the arrangement of said roller engagement surfaces about the cross-section of said rail is configured to contribute bending strength to said rail.
- 15 4. A rail as claimed in claim 2 or claim 3 wherein said roller engagement surfaces are arcuate when viewed along the cross-section of said rail.
5. A rail as claimed in any one of claims 1 to 4 wherein said cross-section is devoid of right-angles corners.

6. A rail as claimed in any one of claims 1 to 5 which, when aligned in its intended mounting position, has a maximum vertical dimension greater than the maximum lateral dimension.
7. A rail as claimed in claim 6 wherein the maximum vertical dimension is in 5 the order of twice the maximum lateral dimension.
8. A rail as claimed in any one of claims 1 to 7 wherein said rail is symmetrical about both vertical and horizontal axis when said rail is aligned in its intended mounting position.
9. A stairlift rail of substantially constant cross-section, all the elements 10 which define said cross section being arranged about a common internal cavity, said cross-section including roller engagement surfaces arranged to:
 - (i) support a stairlift carriage for rolling movement along said rail; and
 - (ii) in combination with said carriage, resist rotation of said carriage about said rail.
10. A rail as claimed in claim 9 wherein those roller engagement surfaces 15 configured to provide resistance to the rotation of said carriage about said rail are also configured to contribute bending strength to said rail.

11. A stairlift rail, said stairlift rail being characterised in that the cross-section thereof is non-circular but devoid of right-angled corners; said cross-section being symmetrical about both vertical and horizontal axes when said rail is aligned in its intended mounting configuration.
- 5 12. A stairlift rail, said stairlift rail being characterised in that it is roll formed and the cross-section thereof is non-circular and configured to provide resistance to rotation of a stairlift carriage about the axis thereof.
- 10 13. A stairlift rail when constructed arranged and operable substantially as here described and illustrated with reference to the accompanying drawings.
14. A stairlift assembly including a rail as claimed in any one of the preceding claims.